

PATENT

Our Case No. 01090

**APPLICATION FOR LETTERS PATENT OF THE
UNITED STATES OF AMERICA BY**

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U.S.A.

FOR:

COLUMNAR JACK CONCEALING DEVICE AND METHOD

09872899-060201
FO2090-66827860

SPECIFICATION

TO WHOM IT MAY CONCERN:

BE IT KNOWN that Scott Eden is a citizen of the United States and is a resident of

5 Dunbar, Wisconsin, U.S.A. and has invented new and useful improvements in a

COLUMNAR JACK CONCEALING DEVICE AND METHOD

and does hereby declare that the following is a full, clear and exact description, reference
being had to the accompanying drawings and to the numerals of reference marked thereon,
which form a part of this specification.

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BACKGROUND OF THE INVENTION

Field of the Invention

5 The present invention relates to columnar concealing or covering devices for jacks and a method of protectively concealing column support jacks. More specifically, the present invention is primarily intended as a shielding or concealing apparatus or device and a method of installation for jacks that may be used for leveling, supporting and securing structural support members on structures such as cabins, homes, buildings, garages, signs, and the like, where the structural support members can include columns, posts, beams, joists and so forth.

Description of the Related Art

10 Structural support members, such as columns, posts, beams, joists, and so forth are an important structural aspect in construction of homes, buildings, garages, signs, and the like. Maintaining a structurally secure, level connection between the structural support member and the member(s) it supports is critical to the stability of the structure. Moreover, maintaining a level surface, such as a level roof, is critical to the stability and safety of a structure as well as to the aesthetics imparted to the beholder. Jacks, including adjustable
15 jacks, are often used to maintain this secure connection, to adjust and to level a surface, and to compensate for the disparity in the construction process, materials, and so forth. Such disparities can be caused in timber construction, for example, due to the swelling and
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shrinkage characteristics of wood, to swelling and shrinkage of underlying soils, or to the availability and usage of materials that are shorter than the required material lengths.

When jacks are used for columnar support securement, aesthetic, structural, and safety issues must be addressed. Protection of the jack from slippage or movement, as well as overall aesthetic appearance, become important objectives. These issues can be addressed by concealing and shielding the jack from outside view. In an effort to address these issues, devices have been developed to conceal and shield jacks and columnar members.

For example, U.S. Patent No. 6,065,268, which issued to Gump, discloses a plastic decorative and protective sheath designed to cover jacks used to stabilize house beams, to lift and level mobile homes and the like. The '268 jack cover comprises three half-sectioned covering parts: a capital, a column, and a base and requires adhesives and tongue and groove connections. However, in the field of wood construction, such as in construction of a log cabin, natural wood aesthetics are important and the '268 jack cover would extend the full length of the column and would cover the natural aesthetics of the wood columns used. Moreover, any variation in the height of the column would require an additional cutting operation of the '268 jack cover and subsequent material waste. Once cut, the '268 jack cover would not fully cover the column should the length increase or if a new, longer column were used. Moreover, once cut, the '268 jack cover would not completely compensate for the shrinking and swelling dimensions of the underlying column and gaps or failure points in the parts could weaken the strength and the aesthetics of the cover.

U.S. Patent No. 3,049,195, which issued to J. H. Leat et al., discloses Demountable Partitions that utilize stanchions and small screw jack devices. The small screw jacks are covered by molding or skirting strips having ribs for insertion into the groove of a channel strip as well as splayed edges (see FIGS. 1, 7, 10, 11, 12 and 14 of the '195 Patent).

5 However, the '195 molding or skirting strips are disclosed in panel construction and must be manufactured for each wall-to-panel gap size and orientation. In addition, the molding or skirting strips require the cooperation of specially cut and placed channeling strip(s). This construction technique could become onerous and would affect aesthetics in columnar construction, particularly in wood construction where again, the natural material aesthetics are required.

It is therefore important and necessary that a columnar covering device for a jack be developed that has universal application with varying columnar construction sizes, shapes, and lengths, requires few working parts, reduces the likelihood of material waste, accommodates immediate access for jack and material adjustments, due to such causes as shrinkage and swelling, and is easy to use and manufacture.

Other objects of my invention, as well as particular features, elements, and advantages thereof, will be elucidated in, or apparent from, the following description and the accompanying drawing figures.

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SUMMARY OF THE INVENTION

The present invention provides a columnar covering device for a jack and a method of installing a jack concealing kit for a columnar support. According to the present invention a columnar covering device for a jack is provided and comprises a strap member, a skirt for circumferentially covering the jack, and a band member for attaching the skirt to the strap member. The strap member is sized and shaped for folding over upon itself and for enclosing the band member and a portion of the skirt. The present invention can allow quick access to the jack for adjusting purposes and can be used, for example, on a columnar jack on a cabin structure.

In another embodiment, the present invention provides an apparatus for shielding a structure supporting device, such as a jack. The apparatus comprises a first adjustable band member, a second adjustable band member, and an adjustable shield member for shielding the structure supporting device. The second adjustable band member can couple the first adjustable band member with the adjustable shield member and the first adjustable band member can enclose the second adjustable band member.

In a further embodiment of the present invention, in combination, an apparatus for shielding a structure supporting device is provided. The combination comprises a first adjustable band member, a second adjustable band member, an adjustable shield member for shielding the structure supporting device, and a structural support. The second adjustable band member can couple the first adjustable band member with the adjustable shield member and with the structural support. The first adjustable band member can then enclose the second adjustable band member.

In another embodiment of the present invention, a jack concealing kit for columnar supports is disclosed. The kit comprises a jack for supporting the columnar support, an adjustable strap member, an adjustable shield member, and an adjustable clamp member. The adjustable clamp member can attach the adjustable shield member with the adjustable strap member and then attach both to the columnar support. The adjustable shield member can conceal and shield the jack from view. Finally, the adjustable strap member can enclose the adjustable clamp member and shield it from view for presenting a uniform appearance blending with the columnar support supported by the jack.

In still a further embodiment, in combination, a jack concealing structure for a columnar support of a structure is provided. The combination comprises an adjustable, flexible strap, an adjustable, stiff skirt, a mechanically adjustable clamp, an adjustable jack, and the columnar support. The adjustable jack can support and secure the columnar support. The adjustable, flexible strap can surround and engage a portion of the columnar support adjacent the adjustable jack. The mechanically adjustable clamp can attach the adjustable, stiff skirt to the adjustable, flexible strap and to the columnar support. Then the adjustable, stiff skirt can conceal the adjustable jack as the skirt is circumferentially adjustable relative to the columnar support for concealing the jack. Finally, the adjustable, flexible strap can fold over upon itself and can encase and protect the mechanically adjustable clamp.

Finally, the present invention provides a method of concealing a jack using a jack concealing kit with a columnar support, the method comprising the acts of:

The method comprises the acts of first, providing a jack, then attaching the jack to the
 columnar support and adjusting the jack for securing the columnar support. Next is
 wrapping an adjustable, flexible strap about the secured columnar support and adjusting
 the adjustable, flexible strap upon itself for securing the adjustable, flexible strap to the
 secured columnar support. The next act is wrapping an adjustable, stiff skirt about the
 secured adjustable, flexible strap and the secured columnar support and adjusting and
 securing the adjustable, stiff skirt to the secured adjustable, flexible strap and the secured
 columnar support. Installation continues by covering the attached jack with the secured
 adjustable, stiff skirt and concealing the attached jack from view, followed by mounting,
 adjusting, and securing a mechanically adjustable clamp in assembled relation around and
 over the secured adjustable, flexible strap, the secured adjustable, stiff skirt, and the
 secured columnar support maintaining concealment of the attached jack. The final act is
 folding the secured adjustable, flexible strap over the secured adjustable, stiff skirt and
 the secured mechanically adjustable clamp for concealing the secured adjustable, stiff
 skirt, or at least a portion thereof, and for concealing and protecting the secured
 mechanically adjustable clamp.

The present invention, therefore provides a columnar covering device for a jack that
 has universal application with varying columnar construction sizes, shapes, and lengths,
 requires few working parts, reduces the likelihood of material waste, accommodates
 immediate access for jack and material adjustments, due to such causes as shrinkage and
 swelling, and is easy to use and manufacture.

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DESCRIPTION OF THE DRAWINGS

Other features of my invention will become more evident from a consideration of the following detailed description of my patent drawings, as follows:

5 Figure 1 is a perspective view of an embodiment of the present invention showing an application of the columnar covering device for a jack as applied to a column of a log cabin-type structure;

Figure 2 is an exploded view of an embodiment of the present invention showing a strap member, a skirt member, and a band member;

10 Figure 3 is a top sectional view of the band member of the embodiment of FIG. 2 showing one type of adjustment means, a mechanical-type mechanism;

Figure 4 is a cross-sectional view of a jack of the present invention supporting a columnar member, the jack having adjustable capability;

Figure 5 is a plan and cross-sectional view of a support plate of the jack of FIG. 4;

15 Figure 6 is a plan and cross-sectional view of a base plate of the jack of FIG. 4;

Figure 7 is a side view of an incremental adjustable support mechanism of the jack of FIG. 4;

20 Figure 8 is a cross-sectional view of an embodiment of the present invention showing installation and adjustment of the jack and columnar covering device to the columnar member wherein the jack is placed under the columnar covering at a bottom end of the columnar member;

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Figure 9 is a cross-sectional view of the installation and adjustment of FIG. 8 showing a downward fold over a strap member and subsequent enclosure of a band member and a portion of a skirt member concealing the jack therein;

Figure 10 is a cross-sectional view of an embodiment of the present invention showing installation and adjustment of the jack and columnar covering device to the columnar member wherein the jack is placed over the columnar covering at a top end of the columnar member; and

Figure 11 is a cross-sectional view of the installation and adjustment of FIG. 8 showing an upward fold over a strap member and subsequent enclosure of a band member and a portion of a skirt member concealing the jack therein.

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DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings, the present invention concerns a columnar covering device for a jack, illustrated by way of example in FIGS. 1-11. As discussed above in the

5 Background of the Invention, it is very important to home and building construction and maintenance to maintain a level roof surface as well as other surfaces. In particular, in the construction and maintenance of log cabins and other wood homes, wood shrinkage must be compensated for in order to maintain a level roof surface, level deck surface, and so forth. In order to maintain the level surface, jacks and other devices can be used, as described below, for adjusting the columnar supports for leveling roofs and the like and for compensating for shrinkage of the wood material. Concealment of the jack and quick access and adjustment of the jack to level the cabin structures is therefore of paramount importance to the functionality, safety, and aesthetics of the cabin, home or structure. The present invention can provide these key features and can satisfy these needs.

15 It is not intended that the present invention be limited solely to columns and wood construction nor to concealment of jacks, rather it is intended that the scope of the present invention also includes other structural supports, such as posts, beams, joists and the like, other materials, such as metals, synthetics, etc., and concealment of any item used to secure the structural supports including jacks, blocks, other structural members, and so forth.

20 As is illustrated in FIGS. 1- 11, one embodiment of the present invention discloses, a columnar covering device 10, or apparatus, for shielding a structure supporting device 12, such as a jack, that can be securing a columnar support 14, such as

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a column, a post, a beam, a joist, and so forth. The columnar support 14 can provide structural support to a structure 16, such as the log cabin shown in FIG. 1. Other structures, including buildings, shops, signs, and the like are also included within the scope of this invention.

5 The columnar covering device 10, as shown in FIGS. 2 and 3, comprises a first adjustable band member 18, a second adjustable band member 20, and an adjustable shield member 22 for covering the jack 12. In a preferred embodiment, the first adjustable band member 18 is a strap, belt-like member, or vinyl clamp cover as it is known in other embodiments. The clamp 18 has adjustment means 24 for wrapping
10 (Arrow A-A in FIG. 9 and Arrow B-B in FIG. 11) the strap 18 around the columnar support 14, shown in FIGS. 1 and 8-11, and then over itself to secure it to the columnar support and to account for the variety of sizes, shapes, and dimensions of the columnar supports, including any circular, square, and irregularly shaped columns (i.e. knotted) and the like. In this way, the clamp 18 (and the columnar covering device 10 as a whole) can
15 fit and adjust to any surface dimension, shape, and texture. The adjustment means 24 can include Velcro, adhesive, nails, screws, nuts, bolts, rivets, and mechanical mechanisms. In addition, the strap 18 is preferably an annular band member that has ends that can be disposed in lapped relation to adjust and secure the strap around the columnar support 14.

20 An important feature of the strap 18, described in detail below, is that it be constructed of a flexible material that is strong and resistant to degradation, such as from weathering elements and the like, but that can adsorb moisture and protect the underlying and adjacent wood members and other members. Materials could include synthetics (i.e. soft plastics), rubberized compounds, vinyl, cloth materials, and elastic materials.

Excellent results are attainable where a soft easily foldable cloth material is used of any suitable type. In addition, the material could be manufactured to look like the material of the columnar support 14 that it will attach to for blending into the structure. As the strap 18 performs a concealing function by preferably folding radially outwards and over itself (Arrows A-A in FIG. 9 and Arrows B-B in FIG. 11) for reasons heretofore discussed, the material used must allow the strap 18 to "reverse bend", or bend over upon itself. In this way, the strap can shield the second adjustable band member 20 underneath and protect people from injuring themselves on it. The strap 18 can also provide a moisture absorption barrier, if constructed from such a material, that can prevent moisture from traveling down the columnar support 14 and contacting the entire columnar support and the underlying floor surfaces.

In a preferred embodiment, the adjustable shield member 22 is a skirt, shielding member, jack cover, or adjustable sleeve, as it is known in other embodiments. The skirt 22 can be wrapped around the strap 18 and the columnar support 14 and then overlap itself, as shown in FIGS. 1 and 8-11, to secure it to the strap and columnar support and also account for the variety of sizes, shapes, and dimensions of the columnar supports and jacks 12. The skirt 22 can also be sized lengthwise to accommodate different gap and jack heights to account for axial shifting (i.e. swelling, shrinking, etc.) as the jack 12 secures the columnar support 14 and while maintaining concealment and protection of the jack.

The skirt 22 is preferably constructed of a stiff material that will hold its shape in any orientation (i.e. right-side up, upside-down, sideways, or at any angle), will shield and conceal the jack 12 from view and from weathering elements and the like, is strong,

will be resistant to degradation due to the weathering elements and other factors, but which still allows quick access to the concealed jack with little effort followed by easy closing of the skirt. In addition, the skirt 22 must also be flexible so as to allow easy entrance into the jack for leveling adjustments and the like. Materials can also include synthetics, rubberized compounds, paper products, stiff cloth materials, elastic materials, and so forth. Like the strap 18, the skirt 22 could be manufactured to look like the material of the columnar support 14 that it will attach to so as to blend into the structure and provide a uniform appearance. Adjustment and securement of the skirt 22 can include skirt adjustment means 26, such as overlap upon itself, Velcro or adhesive attachment, or mechanical mechanism.

The second adjustable band member 20 is a clamp, a screw band clamp, or other similar clasping device as it is known in other embodiments. The clamp 20 can be wrapped around the skirt 22, the strap 18, and the columnar support 14, and then overlap itself, as shown in FIGS. 1-3 and 8-11. The clamp 20 can thereby function to secure the skirt to the strap and to the columnar support while accounting for the variety of sizes, shapes, and dimension of the columnar support. The clamp, as shown in FIGS. 2 and 3, can be constructed of a metal, synthetic, rubberized compound, rope material, and any other material within the scope of this invention. A metal clamp having a clamp adjustment means 28, as illustrated in FIGS. 2 and 3, is preferred.

Once clamped and adjusted, the strap 18 can be folded radially outwards and over itself (Arrows A-A in FIG. 9 and Arrows B-B in FIG. 11), the clamp 20, the skirt 22, and at least a portion of the columnar support 14, as shown in FIGS. 8-11. In this manner, the clamp 20 can be hidden from view and protected and the columnar covering device 10

can blend into the columnar support 14, or at least provide an aesthetically pleasing addition to the columnar support while protecting and concealing the jack 12, as illustrated in FIG. 1.

The structure supporting device 12, such as the jack, can include adjustable jacks, as illustrated in FIGS. 4-7. In a preferred embodiment, the jack 12 is an adjustable jack that comprises a base plate 30 (FIG. 6), an incremental adjustable support mechanism 32 (FIG. 7), such as a nut and bolt system, and a support plate 34 (FIG. 5). As shown in FIGS. 4 and 8-11, the columnar support 14 can have a hole 35 drilled into an end 36, be it a bottom end 38 (FIGS. 8 and 9), a top end 40 (FIGS. 10 and 11), a side, or at any angle or orientation that the columnar support may be angled at and to which is attached the jack 12 or other support device. The hole 35 is preferably sized to fit the particular incremental adjustable support mechanism 32 in such a way as to provide a secure fit. The support plate 34 should have a hole 42 drilled through it for passage and adjustment of the incremental adjustable support mechanism. The base plate 30 can also have a hole 44 at least partially drilled into it to secure the incremental adjustable support mechanism from slippage.

An important feature of the present invention is that it can be provided, manufactured, and sold as a kit, a jack concealing kit for columnar supports and the like. The kit could include the jack 12, the strap 18, the clamp 20, and the skirt 22 or any permutation of these items, including the columnar support 14. The kit could also be part of a larger package, such as a log cabin construction kit.

As mentioned above, the columnar covering device 10 is intended to be placed at any orientation required by the columnar support 14. In particular, the columnar covering

device 10 can be positioned at both or either of the bottom end 38 (FIGS. 8 and 9) or the top end 40 (FIGS. 10 and 11) of the columnar support 14 as needed or by design. When positioned at the bottom end 38, the strap 18 can be folded downwards (Arrows A-A in FIG. 9) to cover itself, the clamp 20, the skirt 22, and at least a portion of the columnar support 14. When positioned at the top end 40, the strap 18 can be folded upwards (Arrows B-B in FIG. 11) to cover itself, the clamp 20, the skirt 22, and at least a portion of the columnar support 14. Therefore, the materials chosen for the strap and the skirt should be stiff enough to hold their form and to conceal the jack 12 no matter what the directional orientation is.

The columnar covering device 10 can therefore provide an apparatus and means for concealing columnar supporting devices, such as the jack 12. The adjustability of the individual elements and parts discussed above allow the user to adjust, remove, replace, etc. each part to address each columnar support 14 and its movement, dimensions, shapes, and physical characteristics. These adjustments can be made quickly, efficiently, and cost-effectively and can be made during the life of the columnar support 14 as the material ages, shrinks, swells, and so forth or if replacement columnar supports have different length measurements. The simplicity of the device should also result in lower manufacture costs.

Finally, in usage the present invention provides a method of installing a jack concealing kit 10 for a columnar support 14, as shown in FIGS. 8-11. The method comprises the acts of first, providing a jack 12 and then attaching the jack to the columnar support 14 and adjusting the jack for securing the columnar support. The next act is wrapping an adjustable, flexible strap 18 about the secured columnar support 14 and

adjusting the adjustable, flexible strap 18 upon itself for securing the adjustable, flexible strap 18 to the secured columnar support 14. What can follow is wrapping an adjustable, stiff skirt 22 about the secured adjustable, flexible strap 18 and the secured columnar support 14 and adjusting and securing the adjustable, stiff skirt 22 to the secured adjustable, flexible strap and the secured columnar support.

The next act is covering the attached jack 12 with the secured adjustable, stiff skirt 22 and concealing the attached jack from view followed by mounting, adjusting, and securing a mechanically adjustable clamp 20 around and over the secured adjustable, flexible strap 18, the secured adjustable, stiff skirt 22, and the secured columnar support 14 for maintaining concealment of the attached jack 12. Finally, the installation is completed by folding the secured adjustable, flexible strap 18 over the secured adjustable, stiff skirt 22, or at least a part of it, and over the secured mechanically adjustable clamp 20 for concealing the secured adjustable, stiff skirt 22 and the secured mechanically adjustable clamp 20. In this way the present invention can protect the clamp 20 and the columnar support from moisture and users or other people, such as kids, from sharp edges on the clamp 20. Moreover, the strap 18 can conform to a variety of columnar support surfaces, be they circular, square, irregular, etc. so that the device 10 can be universally used.

As discussed above, this installation can be performed right-side up (FIG. 8 and 9), upside-down (FIGS. 10 and 11) or at any orientation. The installation is quick and easy and if adjustments or removal are needed to the jack 12 or columnar support 14, then the a jack concealing kit 10 can be uninstalled quickly and easily and can be reused later on the same or any other columnar support 14. To uninstall the kit 10, the procedure can

include the following acts: unfolding the secured adjustable, flexible strap 18, loosening and removing the mechanically adjustable clamp 20, uncovering the attached jack 12, unwrapping and removing the adjustable, stiff skirt 22, unwrapping and removing the adjustable, flexible strap 18, and loosening and detaching the jack 12 from the columnar support 14.

Moreover, the acts discussed above are preferably performed sequentially as disclosed, although the acts can be performed in any order that satisfies the scope and intent of the invention. For example, the skirt 22 could be placed on the columnar support 14 before the strap 18 and then both could be bound by the clamp 20 before the strap is folded over itself and the other parts.

In construction and in use the present invention therefore provides a columnar covering device for a jack that has universal application with varying columnar construction sizes, shapes, and lengths, requires few working parts, reduces the likelihood of material waste, accommodates immediate access for jack and material adjustments, due to such causes as shrinkage and swelling, and is easy to use and manufacture.

As various possible embodiments may be made in the above invention for use for different purposes and as various changes might be made in the embodiments and methods above set forth, it is understood that all of the above matters here set forth or shown in the accompanying drawings are to be interpreted as illustrative and not in a limiting sense.